

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: June 4, 1997  
Date Received: May 21, 1997  
Project: Metro Grab, PO #M57272  
Date Samples Extracted: May 29, 1997  
Date Extracts Analyzed: June 2, 1997

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE  
FOR CHROMIUM, COPPER, NICKEL, AND ZINC  
USING METHOD 6010**

**Samples Processed Using Method 3005A**  
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M57272	0.42	0.44	0.71	0.06
Method Blank	<0.05	<0.05	<0.05	<0.05

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**QUALITY ASSURANCE RESULTS FOR  
 THE ANALYSIS OF WATER SAMPLES  
 FOR TOTAL METALS BY  
 INDUCTIVELY COUPLED PLASMA (ICP)  
 (METHOD 6010)**

Laboratory Code: 78288 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.42	0.43	2	0-20
Copper	mg/L (ppm)	0.44	0.43	2	0-20
Nickel	mg/L (ppm)	0.71	0.57	22h	0-20
Zinc	mg/L (ppm)	0.06	0.05	18	0-20

Laboratory Code: 78288 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.42	89	91	80-120	2
Copper	mg/L (ppm)	5	0.44	81	82	80-120	1
Nickel	mg/L (ppm)	10	0.71	91	90	80-120	1
Zinc	mg/L (ppm)	5	0.06	93	94	80-120	1

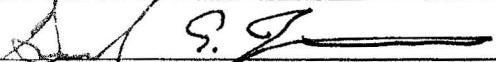
Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	98	97	80-120	1
Copper	mg/L (ppm)	5	95	92	80-120	3
Nickel	mg/L (ppm)	10	102	101	80-120	1
Zinc	mg/L (ppm)	5	102	101	80-120	1

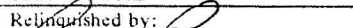

h- The RPD results are outside of the acceptance criteria established for this analysis. The sample contained suspended particulates. The variability present can be attributed to this sample type.

1 KN5 AI  
5/2/97 1:00pm

Send Report To:

SITE NO.		PROJECT NAME		PURCHASE ORDER #	
7238		METRO GRAB		m 57272	
SAMPLERS (signature)				PROJECT LOCATION	
				3200 6 <sup>th</sup> Ave. S.	
REMARKS				SAMPLE DISPOSAL INFORMATION	
				<input type="checkbox"/> Dispose after 30 days <input checked="" type="checkbox"/> Return Samples <input type="checkbox"/> Call for Instructions	

[illegible]

SIGNATURE	PRINT NAME	COMPANY	Date	Time
Relinquished by: 	Ray Ramos	ACW	5/21/97	12:55 PM
Received by: 	Sean Bullock	FBI	5/21/97	12:55 PM
Relinquished by:				
Received by:				

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D.  
Beth Albertson, M.S.  
Charlene Jensen, M.S.  
Bradley T. Benson, B.S.  
Kurt Johnson, B.S.  
Melanie Kirol, B.S.

**June 4, 1997**

3012 16th Avenue West  
Seattle, WA 98119-2029  
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e-mail: fbi@isomedia.com

**INVOICE # 97ACU0604-2  
DUPLICATE COPY**

Accounts Payable  
Alaskan Copper Works  
628 South Hanford St.  
Seattle, WA 98134

**RE: Project Metro Grab, PO #M57272: Results of testing requested by Gerry Thompson, Project Manager for material submitted on May 21, 1997.**

**1 water sample analyzed for  
Chromium, Copper, Nickel, and Zinc  
using Method 6010 @ \$65 per sample**

**\$ 65.00**

**Amount Due .....**

**\$ 65.00**

**FEDERAL TAX ID #(b) (6)**



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Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

June 4, 1997

Gerry Thompson, Project Manager  
Alaskan Copper Works  
628 South Hanford St.  
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on May 21, 1997  
from your Metro Grab, PO #M57272 project.

We appreciate this opportunity to be of service to you and hope you will call if you  
should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Kurt Johnson  
Chemist

keh  
Enclosures  
ACU0604R.DOC